Notes on IWFM Version 3.02

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This version of IWFM includes optional subsidence outputs as well as new features to improve simulation times. The following is a list of modifications and new features:

1. Most data files of applications using IWFM v3.01 can be directly used with this version. The only files that need to be modified are the Main Input File (Unit 5) and Print Control File (Unit 10) in Simulation. Now, an optional subsidence output file for Tecplot animations can be generated (file Unit 51 specified in Main Control File). Also time-series subsidence values can be printed at user-defined nodes when listed in the new Print Control File (Unit 10). The time-series subsidence data are printed to file Unit 41 defined in the Main Input File (Unit 5).
2. Previous versions of IWFM used year-3000 flag to represent recycled time-series data. However, year-3000 flag caused incorrect data reading for leap years. To avoid this problem, year-4000 flag is now used to represent recycled time-series data. Applications using previous IWFM versions and year-3000 flag will need to be modified to use year-4000 flag instead.
3. A fast solver based on generalized preconditioned conjugate gradient method is implemented. This solver can be used by setting MSOLVE flag to 2 in the Main Control File (Unit 5) of Simulation. It has been observed that this new solver can decrease the simulation times for large problems as much as 50%.
4. To improve the quality of IWFM technical support, a new version control system is implemented. Now, the version as well as the revision number of IWFM is printed on the opening screen. Alternatively, the user can run any of the IWFM executables (Pre-

processor, Simulation, Budget and Z-Budget) with the flag “-about” (e.g. Simulation3_02.exe –about) to retrieve the revision number of the IWFM executable.

5. For users who are interested in building the executables from scratch using Intel Visual Fortran, Microsoft Visual Studio 2005 solution configuration files are now distributed.